Commonwealth Edison Company
LaSalle Generating Station
2601 North 21st Road
Marseilles, IL 61341-9757
Tel 815-357-6761

ComEd

September 18, 1998

United States Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555

Licensee Event Report #98-015-00, Docket #050-373 is being submitted to your office in accordance with 10 CFR 50.73(a)(2)(iv).

If there are any questions or comments concerning this letter, please refer them to Perry L. Barnes, Regulatory Assurance Manager, at (815) 357-6761, extension 2383.

Respectfully,

Fred R. Dacimo
Site Vice President
LaSalle County Station

Enclosure

cc: J. L. Caldwell, Acting NRC Region III Administrator
M. P. Huber, NRC Senior Resident Inspector - LaSalle
D. M. Skay, Project Manager - NRR - LaSalle
F. Niziolek, IDNS Senior Reactor Analyst
INPO - Records Center

NRC FORM 366 (6-1998) U.S. NUCLEAR REGULATORY COMMISSION

1170

APPROVED BY OMB NO. 3150-0104 EXPIRES 06/30/2001

Estimated burden per response to comply with this mandatory information collection request: 50 hrs. Reported lessons learned are incorporated into the licensing process and fed back to industry. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), U. S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0104), Office of Management and Budget, Washington, DC 20503. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1):	DOCKET NUMBER (2)	PAGE (3)
LaSalle County Station, Unit 1	05000373	1 of 4

TITLE (4) Manual Reactor Scram following Level Control Transient

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
08	19	98	98	015	00	09	18	98	FACILITY NAME	DOCKET NUMBER

OPERATING MODE (9)	1
POWER LEVEL (10)	058

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)

☐ 20.2201(b)	☐ 20.2203(a)(2)(v)	☐ 50.73(a)(2)(i)	☐ 50.73(a)(2)(viii)
☐ 20.2203(a)(1)	☐ 20.2003(a)(3)(i)	☐ 50.73(a)(2)(ii)	☐ 50.73(a)(2)(x)
☐ 20.2203(a)(2)(i)	☐ 20.2003(a)(3)(ii)	☐ 50.73(a)(2)(iii)	☐ 73.71
☐ 20.2203(a)(2)(ii)	☐ 20.2003(a)(4)	☒ 50.73(a)(2)(iv)	☐ OTHER
☐ 20.2203(a)(2)(iii)	☐ 50.36(c)(1)	☐ 50.73(a)(2)(v)	Specify n Abstract below or
☐ 20.2203(a)(2)(iv)	☐ 50.36(c)(2)	☐ 50.73(a)(2)(vii)	in NRC Form 366A

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
George Wilhelmsen, System Engineer	(815) 357-6761 Extension 2111

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX
X	JK	CBD	B045	Y						

SUPPLEMENTAL REPORT EXPECTED (14)		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
☐ YES (If yes, complete EXPECTED SUBMISSION DATE)	☒ NO				

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines 16)

While performing level control testing for the 1A Turbine Driven Reactor Feed Pump, automatic level control was lost when the Nuclear Station Operator (NSO) attempted to place it in 3 element automatic control, causing reactor water level to decrease. The NSO attempted to take manual level control, but this attempt was unsuccessful and reactor water level began to rise.

At plus 50 inches increasing, the NSO inserted a manual reactor scram due to the feedwater/level transient. This reactor water level was a predetermined scram contingency which had been discussed during the pre-evolution brief prior to the feedwater testing. During the scram, all systems functioned as required.

The cause of this event has been attributed to a failure of the Control Card associated with the Bailey Reactor Water Level Control System. The corrective action taken was to replace the failed card with a refurbished unit.

There was no impact on the health and safety of the public. This is being reported pursuant to 10 CFR 50.73(a)(2)(iv).

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
LaSalle County Station, Unit 1	05000373	98	015	00	2 of 4

(If more space is required, use additional copies of NRC Form 366A)(17)

PLANT AND SYSTEM IDENTIFICATION

General Electric - Boiling Water Reactor, 3323 Megawatts Thermal Rated Core Power

Energy Industry Identification System (EIIS) codes are identified in the text as [XX].

A. CONDITION PRIOR TO EVENT

Unit(s): 1 Event Date: 08/19/98 Event Time: 12:22 Hours
Reactor Mode(s): 1 Power Level(s): 58% RCS [AB] Temperature: 540 degrees F
Mode(s) Name: Run RCS [AB] Pressure: 1000 psig

B. DESCRIPTION OF EVENT

There was no equipment inoperable at the beginning of this event which contributed to the severity of this event.

At approximately 12:10 pm on Wednesday, August 19, 1998, Unit 1 was at 58 percent power performing feedwater system testing. The initial feedwater configuration was with the 1B Turbine Driven Reactor Feed Pump [JK] (TDRFP) in three element automatic mode, with the Motor Driven Reactor Feed Pump (MDFRP) in manual. Test procedure LaSalle Special Test (LST)-98-0136, Level Control/Feedwater Performance Test, called for the 1A TDRFP to be placed in three element automatic mode [SJ].

The Nuclear Station Operator (NSO) started the 1A TDRFP in accordance with LaSalle Operating Procedure (LOP)-FW-04, Startup of Turbine Driven Reactor Feed Pump (TDRFP), and increased flow using the associated Manual/Automatic (M/A) station. As the 1A TDRFP was brought to rated flow, the flow from the MDRFP was ramped down to minimum, and the pump was shutdown.

The NSO then balanced flows between the 1A and 1B TDRFP, and placed the 1A TDRFP M/A Station in three element AUTO. At this point, the 1A TDRFP rapidly ramped from approximately 4.5 million pounds mass per hour that had been established while in manual mode to zero flow. The 1B TDRFP ramped to maximum flow to maintain reactor water level.

Reactor water level dropped to 20 inches on the narrow range indication. In an effort to restore reactor water level to normal, the NSO took appropriate actions by placing the 1A TDRFP in Manual mode on the M/A station. The NSO then established approximately 1 million pounds mass/hour of feedwater flow on the pump, which caused water level in the reactor to rise rapidly.

Level control was unable to be re-established prior to reaching the pre-set manual scram criteria of 50 inches reactor level rising as specified in the pre-evolution briefing.

At 50 inches rising, at 12:22 pm, a manual scram was inserted by the NSO to terminate the event. All ECCS and RPS Systems performed as designed.

At 2:36 pm, this event was reported to the NRC via the ENS System pursuant to 10 CFR 50.72(b)(2)(ii).

This event is reportable pursuant to 10 CFR 50.73(a)(2)(iv). Any event or condition that resulted in a manual or automatic actuation of any engineered safety feature (ESF), including the reactor protection system (RPS). Operator actions did not adversely effect the course of the event.

C. CAUSE OF EVENT

The root cause of this event was the failure of the A TDRFP Control Unit Card (Bailey 721). The failure of this card caused the manual/automatic tracking feature to be lost. When the NSO placed the A TDRFP in three element automatic mode, this caused the A TDRFP to rapidly ramp to zero demand. The NSO took appropriate actions by inserting a manual scram when one of the predetermined scram criteria specified in the pre-evolution briefing was met.

D. SAFETY ANALYSIS

Loss of total feedwater flow with the reactor at 104.8 percent power is analyzed as a moderate frequency transient in Section 15.2.7 of the Updated Final Safety Analysis Report. Feedwater Controller Failure to Maximum Demand is analyzed as a moderate frequency transient in Section 15.1.2A of the Updated Final Safety Analysis Report. Because this event involved a reduction in feedwater flow and subsequent trip prior to exceeding high level trip setpoints, the consequences of this event are bounded by the Updated Final Safety Analysis Report analysis. No additional failures or initial conditions existed that would challenge the expected results of the UFSAR analysis. A manual scram was inserted prior to reaching limiting safety system setpoints. Manual reactor water level control was established following the scram, and reactor water level and pressure restored to the appropriate bands following the scram. All ECCS and RPS systems functioned as expected during this transient. There were no safety consequences for this event since the plant responded to the partial loss of feedwater flow as expected.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
LaSalle County Station, Unit 1	05000373	98	015	00	4 of 4

(If more space is required, use additional copies of NRC Form 366A)(17)

E. CORRECTIVE ACTIONS

Troubleshooting of the Reactor Water Level control system was performed by the Instrument Maintenance Department and Systems Engineering. The failed card was identified and replaced with a pre-tested card. The reactor water level control system was tested and shown to be working in an acceptable manner following the card replacement. The 1A TDRFP is currently in service, in three element control.

F. PREVIOUS OCCURRENCES

LER NUMBER	TITLE
87-022-00	Reactor Scram Due to Failure of Turbine Driven Reactor Feed pump Control Valve
91-006-00	Reactor Scram On Low Reactor Vessel Water Level Due To Loss Of 'A' Turbine Driven Reactor Feedwater Pump Caused By Control Valve Closure

G. COMPONENT FAILURE DATA

Bailey Control Unit Card, Type 721

CATEGORY 1

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:9809240019 DOC.DATE: 98/09/18 NOTARIZED: NO DOCKET #
FACIL:50-373 LaSalle County Station, Unit 1, Commonwealth Edison C 05000373
AUTH.NAME AUTHOR AFFILIATION
WILHELMSEN,G. Commonwealth Edison Co.
DACIMO,F.R. Commonwealth Edison Co.
RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 98-015-00:on 980819,manual reactor scram occurred following level control transient.Caused by failure of control card associated with Bailey RWL CS.Replaced failed card with refurbished unit.With 980918 ltr.

DISTRIBUTION CODE: IE22T COPIES RECEIVED:LTR 1 ENCL 1 SIZE: 5
TITLE: 50.73/50.9 Licensee Event Report (LER), Incident Rpt, etc.

NOTES:

	RECIPIENT ID CODE/NAME	COPIES LTTR	COPIES ENCL	RECIPIENT ID CODE/NAME	COPIES LTTR	COPIES ENCL
	PD3-2 PD	1	1	SKAY,D	1	1
INTERNAL:	AEOD/SPD/RAB	2	2	AEOD/SPD/RRAB	1	1
	FILE CENTER	1	1	NRR/DE/ECGB	1	1
	NRR/DE/EELB	1	1	NRR/DE/EMEB	1	1
	NRR/DRCH/HICB	1	1	NRR/DRCH/HOHB	1	1
	NRR/DRCH/HQMB	1	1	NRR/DRPM/PECB	1	1
	NRR/DSSA/SPLB	1	1	RES/DET/EIB	1	1
	RGN3 FILE 01	1	1			
EXTERNAL:	L ST LOBBY WARD	1	1	LITCO BRYCE,J H	1	1
	NOAC POORE,W.	1	1	NOAC QUEENER,DS	1	1
	NRC PDR	1	1	NUDOCS FULL TXT	1	1

CATEGORY 1 DOCUMENT

NOTE TO ALL "RIDS" RECIPIENTS:
PLEASE HELP US TO REDUCE WASTE. TO HAVE YOUR NAME OR ORGANIZATION REMOVED FROM DISTRIBUTION LISTS OR REDUCE THE NUMBER OF COPIES RECEIVED BY YOU OR YOUR ORGANIZATION, CONTACT THE DOCUMENT CONTROL DESK (DCD) ON EXTENSION 415-2083

FULL TEXT CONVERSION REQUIRED
TOTAL NUMBER OF COPIES REQUIRED: LTTR 22 ENCL 22